

An aerial photograph of Great Keppel Island, Queensland, Australia. The image shows a lush tropical landscape with dense green vegetation, including palm trees and other tropical flora. A prominent feature is a long, dark asphalt airstrip running horizontally across the middle of the island. To the left of the airstrip, there is a large, modern building with a white, angular roof. To the right, there is a long, low building with a brown roof. In the foreground, a sandy beach curves along the edge of the island, meeting the clear, turquoise water of the Great Barrier Reef. Several small boats are visible in the water near the beach. The overall scene depicts a well-maintained resort area integrated into a natural, tropical environment.

# Great Keppel Island Sustainability Statement

Transforming a run down resort into the jewel of the Great Barrier Reef

November 2011

# CONTENTS

“Our vision is not only to work with the community to develop Australia’s most sustainable island resort, but to lead by example in presenting and preserving the world’s most important reef ecosystem” Terry Agnew, GKI Resort Pty Ltd

1. OUR SUSTAINABILITY COMMITMENT .....	3
2. OUR COMMON FUTURE .....	4
3. THE GREAT KEPPEL REVITALISATION PLAN VISION .....	5
4. EMBRACING SUSTAINABILITY .....	6
5. COMMUNITY PARTNERSHIP .....	7
6. REDUCING THE IMPACT .....	8
7. CONTRIBUTION TO CONSERVATION .....	11
8. PRESERVATION OF WORLD HERITAGE VALUES .....	14



EARTHCHECK

# 1. OUR SUSTAINABILITY COMMITMENT

“The Great Keppel Island Revitalisation Plan aims to deliver the most environmentally sustainable eco-tourism resort ever envisaged in Australia and will seek to have a positive impact on the Great Barrier Reef World Heritage Area”.

The Great Keppel Island (GKI) Revitalisation Plan will apply the highest level of environmental scrutiny to ensure that:

- The quality of the Southern Great Barrier Reef improves over the life of the Resort;
- Improved research facilities are made available in the Southern Great Barrier Reef;
- The World Heritage Values of the Great Barrier Reef are actively protected and enhanced;
- The community of Central Queensland have improved access to the Island; and
- Any environmental impacts are either mitigated or offset through commitments to environmental sustainability.

The GKI Revitalisation Plan’s team of expert environmental scientists and advisors will work with the community and leading researchers to ensure the Plan for Great Keppel Island is not only an inspiration to other island resorts but to every guest, supplier and resident to ensure the long-term sustainability of the Great Barrier Reef, its islands and its communities.

At no other point in Australia’s history has the emphasis on environmental management and climate change been so strong. The technology and expertise exist today to create eco-tourism resorts which co-exist with environmentally sensitive areas. We just need to work together to achieve it.

Climate change is one of the most serious issues affecting the long term survival of the Great Barrier Reef. The cornerstone of the GKI Revitalisation Plan will be a significant commitment to the use of renewable energy by embracing one of Australia’s most significant natural resources – its abundant sunshine. This is an ambitious target which will provide a model for future tourism projects to begin to address the issue of climate change.

Key initiatives of the GKI Revitalisation Plan have been developed to ensure that the Great Barrier Reef World Heritage Values are protected and enhanced. These include:

1. A reduction of the original project scale by approximately 75% (reduced by 50%, twice);
2. A sustainability strategy to create Australia’s first carbon-positive island;
3. The establishment of a Great Keppel Island Research Centre and a Biodiversity Conservation Fund;
4. A reduced development footprint and limiting the total building footprint to less than 3% of the island;
5. The reduction of the marina by approximately 55%;
6. A significant setback from Leeke’s Beach wetland and sensitive environments to ensure no adverse runoff enters the wetlands or the surrounding marine park waters;
7. The establishment of 575 hectares of Environmental Protection Areas over Lot 21 (equivalent to 66% of Lot 21) for environmental protection and biodiversity conservation;
8. Significant reduction in scale by adopting an environmental constraints-based approach to site planning; and
9. Provision of buffer zones to ensure protection of habitats and to provide fauna corridors.

The revitalisation of Great Keppel Island provides Australia with an opportunity to show the world it has embraced sustainable design and operation in tourism. The GKI Revitalisation Plan not only protects the World Heritage Values of the Great Barrier Reef but makes a direct contribution to their preservation.

## 2. OUR COMMON FUTURE

“Great Keppel Island is an iconic tourism destination, its natural beauty and location between the reef and mainland is well-known around the globe. With climate change and the Great Barrier Reef being on the top of everyone’s mind a resort that actually aims to improve the quality of the reef and study its future is essential.” Mary Carroll, Chief Executive Officer, Capricorn Tourism

Great Keppel Island is one of the most accessible of over 900 Great Barrier Reef (GBR) islands and coral cays. Located 12 kilometres off the Central Queensland coast it is in easy reach of a growing population with direct connections to southern population centres and three major international airports.

Part of the Keppel Island group, Great Keppel Island is both ecologically important and an area of outstanding scenic quality. However, the Island has been subject to significant past environmental disturbance. It was used as a sheep farm dating back to 1860 with thousands of sheep transported to the Island as well as being developed as a resort facility.

The island remains a special place to the local community. This is due to its proximity to the mainland, sandy beaches, spectacular scenery with million year old beach ridges and dune fields, inspiring headlands and fringing coral reefs formed around the headlands over the past 5,000 years.

**Great Keppel Island is one of only 28 islands in the GBR that have purpose-built tourism resorts. As an already developed site it presents a unique opportunity for revitalisation as recognised in the State Government’s 2009 Central Queensland Tourism Opportunity Plan.**

Tourism Research Australia forecasts international visitor growth of 5% per annum to Australia within the next ten years. The GBR is one of Australia’s most popular international attractions. It is expected that this growth will place greater pressure on already popular sites in the north. Dispersing visitors to well-managed, high capacity sites will be a priority as demand increases.

Sustainable tourism can make a significant contribution to helping visitors understand and participate in the preservation of the GBR.

The greatest threat to the GBR is climate change. Recent research from the Reef and Rainforest Research Centre (RRRC) highlights the threat of climate change and associated sea temperature changes as likely to affect two-thirds of the reef systems.

There is a demonstrated need to:

- Provide leadership in sustainable development to showcase the GBR;
- Undertake research on the impacts of climate change on the GBR;
- Provide a catalyst to reef rehabilitation in affected areas; and
- Regulate anchor damage, dumping and overfishing from unregulated use within the GBR.

**The Great Barrier Reef Marine Park Authority recognise the need to act. Their resources are however already stretched in managing use of the marine environment. Stronger partnerships with the tourism industry for the research, preservation and presentation of sensitive marine environments are needed.**

### 3. THE GREAT KEPPEL ISLAND REVITALISATION PLAN VISION

The vision for the GKI Revitalisation Plan is to create much more than a tourist destination. The GKI Revitalisation Plan aims to make Great Keppel the 'greenest' and most talked about environmentally responsible destination in the country and a leader in global environmental tourism. We want all visitors to Great Keppel Island to see what is possible, to live what is possible and to take our ideas and practices home with them.

Our aim is to transform an old sheep farm and dilapidated resort into a sustainable eco-tourism resort. Every aspect of environmental sustainability has been taken into account in preparing the GKI Revitalisation Plan. The project team will seek to work with government authorities, conservation groups and community members to ensure that the final design meets their expectations and protects the values of this world heritage area.

We will aim to become a learning centre for 21st century sustainability. We are committed to creating a strong sense of community ownership, including a commitment to hire locals, engage local professionals and purchase local materials and produce.

The Resort will embrace best practice in Environmentally Sustainable Design (ESD) principles and guidelines for hospitality facilities, including appropriate site orientation, use of sustainable building processes, use of environmentally friendly materials, passive design attributes such as exterior shading and good-performing façade and glazing elements, high-performance building services systems and resource-conserving systems for energy, water and waste.

The cornerstone of the revised GKI Revitalisation Plan will be a massive commitment to the use of renewable energy by embracing one of Australia's most significant natural resources, its abundant sunshine. The GKI Revitalisation Plan has adopted an ambitious sustainability strategy to produce more clean renewable energy than it consumes each year. This is a specific and targeted response to begin to address the issue of climate change.

Following Minister Garrett's decision in October 2009, the size of the project has been reduced by approximately 50%, reducing the total building and road footprint to less than 3% of the island. In addition, the development footprint will be constrained and kept away from sensitive vegetation areas. Buffer zones will be integrated into the design to protect the Island's flora and fauna species.

“The GKI Resort proposal offers outstanding opportunities to present the World Heritage values of the Great Barrier Reef without developing a new island. To miss this potential would be detrimental to the future of tourism in the Southern Great Barrier Reef and the communities that can benefit from it.” Daniel Gschwind, Chief Executive, Queensland Tourism Industry Council and Board Member of the GBRMPA

## 4. EMBRACING SUSTAINABILITY

“While many eco-resort destinations around the world have embraced sustainability, there are very few that have established this ambitious environmental goal as the cornerstone of a comprehensive sustainability strategy. It will place the Great Keppel Island Resort in a rare category of developments that are redefining sustainable building performance.” ARUP, Renewable Energy Analysis Report 2010

The GKI Revitalisation Plan aims to deliver Australia's most sustainable island resort by applying the highest level of environmental scrutiny to ensure that:

- The quality of the Southern GBR improves over the life of the Resort;
- Improved research facilities are made available in the Southern Great Barrier Reef;
- The World Heritage Values of the GBR are actively protected and enhanced;
- The community of Central Queensland have improved access to the Island; and
- Any adverse environmental impacts are either mitigated or offset through an unmatched commitment to environmental sustainability.

A key feature of the GKI Revitalisation Plan is to create a specialised Research Centre on Great Keppel Island to research and monitor the Great Barrier Reef and contribute to its conservation.



## 5. COMMUNITY PARTNERSHIP

“The community of Central Queensland have a long association with Great Keppel and want to see its return. The community also want to be involved in how and when it is developed.” Grant Cassidy, Chair, Capricorn Tourism & Development Organisation

The GKI Revitalisation Plan is committed to gaining genuine community involvement in the design and operational planning for Great Keppel Island. During the Environmental Impact Statement (EIS) process, the Revitalisation Plan team will engage in a substantial community consultation program which will involve a series of stakeholder engagement meetings and interactive discussions with key environmental organisations. The consultation program will be an integral part of the social impact assessment element of the EIS. All community members will also have the opportunity to contact the project team directly, to provide their comments to be considered and implemented.

**The community consultation program and social impact assessment will aim to ensure the final Revitalisation Plan contributes to the broader region and that the development aligns with the vision of the community.**

### THINKING GLOBAL, ACTING LOCAL

The GKI Revitalisation Plan is committed to local employment, local businesses, local suppliers and local produce. This will not only form part of the Great Keppel Island philosophy but it will be measured through annual sustainability audits by the EarthCheck Company Standard for operation.

Great Keppel Island has always been, and shall remain, a jewel in the crown for local getaways. The Revitalisation Plan is committed to ensuring appropriate community facilities are provided on the Island, that access is improved and that the quality of the natural environment inspires .

The GKI Revitalisation Plan will commit to a strong sense of community and will offer residents of Great Keppel Island electricity and water supplies. The GKI Revitalisation Plan will also provide island residents with improved access to unload goods, increased regularity of ferry services, access to emergency services and improved shopping facilities. Included in the GKI Revitalisation Plan is a commitment to continue to provide a network of walking paths that will allow full public access to the island.

This commitment will significantly improve access to and throughout the Island, deliver the highest standard of community facilities ever provided on the Island.

“Great Keppel Island Residents, the Yeppoon community and businesses, need the tourism to bring back our economy – it’s not only about providing jobs!” L. Vale, Yeppoon

## 6. REDUCING THE IMPACT

“Our entire region will benefit from a well thought out proposal such as this, both economically and from an environmental awareness perspective. With such a strong emphasis on environmental sustainability, the Revitalisation Plan will improve the current state of the environment on the island.” Gerry Christie, GKI Resident and Business Owner



## 6. REDUCING THE IMPACT

### The First Carbon Positive Island Resort Community in Australia

ARUP, a world leading firm of sustainability engineers, has concluded that the GKI Revitalisation Plan can achieve its ambitious target of being Australia's first carbon positive Island through the installation of over 24,000 solar panels on the rooftops of the hotel, tourism villas and apartments. In total, the solar panels will generate over 12,400 megawatt hours of clean renewable energy each year.

The Resort will generate more green power than it can use allowing additional energy to be fed back to the mainland through a submarine cable. Through this activity, additional green energy will be fed back into the grid for the benefit of Central Queensland residents.

Complimenting this unique innovation are a number of other initiatives which will reduce the Island's carbon footprint and energy demands. These include:

- Use of the latest technology in solar hot water systems
- Installation of motion sensors and energy efficient lighting
- Fully insulated villas

Being 'carbon positive' equates to a significant reduction in carbon pollution that is the equivalent of taking over 2,700 cars off the road each year.



### No Adverse Runoff into the Great Barrier Reef Marine Park

The GKI Revitalisation Plan will include appropriate buffers to sensitive areas and the adoption of best practice water sensitive design to ensure that no adverse runoff from the resort will enter the marine waters.

The Resort will incorporate sustainable surface water management and water sensitive design principles, which have been considered in detail during the preparation of a Stormwater Management Plan as part of the EIS. The design will ensure the protection of ecosystem health and water quality within freshwater surface, marine and groundwaters.

### Minimal Impact Design

The GKI Revitalisation Plan layout has been revised through a constraints-based approach by a team of qualified and experienced environmental scientists, engineers and planners. Buildings and paths are located away from the most sensitive environments, instead utilising areas of the Island already significantly disturbed by past grazing activities.

The GKI Revitalisation Plan seeks to locate the tourism accommodation in a manner that is sensitive to the natural topography of the Island and within clusters to allow significant vegetation buffers. Villas will have a two storey height limit to predominately fit below the tree canopies. Building design and materials will be selected which reflect the natural character of the Island and which minimise environmental impacts. The buildings will be designed and orientated to maximise natural ventilation and natural light therefore reducing the need for air conditioning and lighting.

## 6. REDUCING THE IMPACT

### A World-Leading Operation

Great Keppel Island will assess its operating efficiency against EarthCheck's rigorous Company Standard. The principal objectives of the EarthCheck Company Standard are to facilitate:

- Responsible and sustainable environmental and social activities; and
- Improved environmental and social outcomes.

The EarthCheck Company Standard provides organisations with a framework to conduct a comprehensive assessment of their environmental sustainability performance, to achieve Certification and ensure continual improvement.

Through the integration of a Building Management System (BMS) throughout the entire resort, management will be able to properly assess and monitor infrastructure services on a real time basis. This will enable adaptability to ensure minimal impact and maximum efficiency is achieved in operation. Smart metering will be designed in each building to provide a visual display of consumption of electricity, CO2 emissions and water.

### Certified Sustainable Design

Great Keppel Island will be the first GBR Island resort to subject its minimal impact design approach by the internationally acclaimed WATG design firm to the scrutiny of the EarthCheck third-party certification process. This process is underpinned by \$260M in research and development by the Commonwealth funded Sustainable Tourism Cooperative Research Centre (STCRC). This includes having an accredited EarthCheck architect involved throughout the design process as well as submitting to a comprehensive audit to ensure the design meets and exceeds international guidelines for Environmentally Sustainable Design (ESD).

**Through EarthCheck's Building Planning and Design Standard the Great Keppel Island Revitalisation project will be certified against the most rigorous design standard in global travel and tourism.**



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### Sustainable Water Use

The GKI Revitalisation Plan design has a strong focus on reducing water use, water harvesting and recycling. Each villa will have a water tank and water efficient features. The Resort will primarily use rainwater, however a back-up submarine connection will be established to the mainland to ensure a consistent supply.

### A new Standard in Golf Course Design

Located on those parts of the Island that were previously disturbed by sheep farming, the golf course will transform a degraded site into a revegetated sanctuary for many types of flora and fauna to flourish. Our commitment to the EarthCheck design standard will see recycled grey water from the Resort used and only minimal, biodegradable fertilisers employed. Our aim is to ensure that no runoff occurs into the Island's wetlands or the GBR marine park.



## 7. CONTRIBUTION TO CONSERVATION

“Two thirds of the reef ecosystems in the Southern Great Barrier Reef are identified as vulnerable to climate change. One of the most important things that can be done is to monitor and improve water quality and this requires more dedicated research and the rehabilitation of riparian areas and coastal wetlands.”

Sheridan Morris, Reef and Rainforest Research Centre



## 7. CONTRIBUTION TO CONSERVATION

### GREAT KEPPEL ISLAND RESEARCH CENTRE

The GKI Revitalisation Plan will include the establishment of the first specialised Research Centre in the Keppels. The Research Centre will be used to conduct research programs and conservation activities on the Island and within the marine park; monitor fringing coral communities and facilitate student research activities.

Students from local schools and universities will have access to the facility to advance their learning through practical application. The Research Centre will be available for scientists, government departments and other interested parties.

The Research Centre will make accommodation available for visiting scientists and will provide a venue for environmental symposiums.

The Great Keppel Island Research Centre will be an important asset to the community of Central Queensland and will be a vital tool for the future management of the southern part of the GBR. It will bring the following benefits to the region:

- Dedicated Research Centre for the Great Barrier Reef including the delivery of conservation and monitoring programs specifically for the Southern Barrier Reef to ensure the health and wellbeing of the reef is maintained;
- Education facility for local students and universities to expand their knowledge through practical application;
- Hub for scientists and various other interested stakeholders; and
- Partnership with other research centres.



### ENVIRONMENTAL PROTECTION

A series of Environmental Protection Areas covering some 575 hectares of Lot 21 (equivalent to 66% of Lot 21) will be created for environment protection and biodiversity conservation. A Vegetation Management Plan will also be prepared to regenerate the Island's native habitat which has been subject to significant past vegetation disturbance from sheep grazing, feral goats and clearing. The Plan will involve an extensive weed treatment program to allow the regeneration of the Island's native vegetation.

The Resort development will be significantly set back from the Leeke's Beach wetland area to ensure that it is not impacted upon. The GKI Revitalisation Plan will implement appropriate mitigation measures to ensure that no adverse runoff from the resort will impact on the wetlands or the surrounding marine park waters. The Plan will not involve the loss of any wetlands and will not impact upon the wetland function, habitat value or biodiversity of the estuarine wetland areas behind Leeke's Beach.

Through the design and layout of the Revitalisation Plan, development impacts upon any identified sensitive vegetation areas will be mitigated by adequate buffers and best-practice management.

## 7. CONTRIBUTION TO CONSERVATION

### A BIODIVERSITY CONSERVATION FUND

A Biodiversity Conservation Fund (BCF) will be established to provide a significant and on-going funding source for the Great Keppel Island Research Centre. These funds will be directly spent on research and conservation works on the Island and throughout the Keppels.

The funds collected through the BCF will be managed through a research partnership with key local environmental associations and the Reef and Rainforest Research Centre. It is anticipated that the Great Keppel Island Research Centre and the Biodiversity Conservation Fund will significantly improve the state of the environment within the Keppels.

### VOLUNTARY CONTRIBUTION

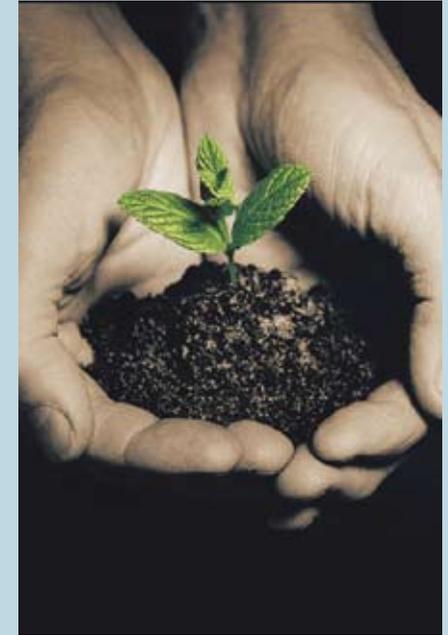
The Voluntary Contribution Scheme for visitors is a program that enables visitors to make a monetary donation to a conservation project of regional, national or international significance. The program would be managed via a partnership (partners typically include NGOs, banks, large businesses or corporations and government agencies). In addition to money and resources contributed by the partners, voluntary donations can also be made by visitors to the region. These can be made during the visitor's stay, at the point of check-out or online after the visitor has returned home. Visitors receive a receipt for their donation and regular updates on the progress of the conservation project. In addition to the Resort, collection points can be extended to include arrival and departure points, retail businesses and local events.

Funds will be allocated to a specific cause, selected by the donator. Programs may include sponsoring a scientist or participating in a monitoring program. The benefit of participating in the Voluntary Contribution Scheme for visitors is that there are tangible outcomes.

**Case Study: Seeds for Bali** Seeds for Bali is a not-for-profit program initiated and sponsored by PT Bank Danamon Indonesia Tbk. and Bali Tourism Development Corporation (BTDC), in partnership with Friends of the National Parks Foundation (FNPF). The program funds reforestation efforts in Nusa Penida, one of the most arid regions of Bali with a declining native Orang-utan population. "Seed money" is donated by PT Bank Danamon Indonesia Tbk, BTDC, American Express Card members worldwide and guests at participating Bali hotels including Alila Hotels and prominent Bali tourist attractions.

FNPF is a not-for profit organisation appointed executor of the Seeds for Bali program. FNPF works to ensure an 80% survival rate of the trees, working with local communities to undertake site maintenance and ongoing plant care. The cost of caring for a tree for 5 years is around US\$3.30 per plant and donations are made in units of one tree.

The project commenced in December 2007 and so far a minimum of 800 trees have been planted over 2 hectares. The program gives guests the added benefit of being able to offset their carbon footprint and make a positive contribution to the economy of Bali.



## 8. PRESERVATION OF WORLD HERITAGE VALUES

“Why do we want to refuse development if it is possible, in this area, using the latest technology and environmentally designed infrastructure that could showcase this area to overseas and local visitors.” Roger Penrose, Resident, GKI



## 8. PRESERVATION OF WORLD HERITAGE VALUES

### PROTECTING THE WORLD HERITAGE VALUES

The Great Keppel Island Revitalisation Plan aims to adopt a constraints-based approach with a smaller overall footprint on relatively 'unconstrained' areas. The revised Revitalisation Plan limits the building footprint to less than 3% of the island with 66% of Lot 21 to be managed for nature conservation. A comprehensive Environmental Impact Statement (EIS) has now been completed by leading scientists, ecologists, planners and engineers to identify potential risks to the environmental values of the Island. During the EIS process, an Environmental Management Plan (EMP) has also been developed by the specialists recommending appropriate mitigation measures to be adopted during the construction, operation and maintenance of the development. The key intents of the EMP will be to ensure that:

- The geomorphology and physiography of Great Keppel Island will not be significantly affected by the proposed development;
- The ecological and biological processes reflected in the beaches, fringing reefs, seagrass beds, rocky headland and intertidal zones are protected;
- The natural beauty of Great Keppel Island will not be significantly affected, as buildings will be restricted to the lower slopes avoiding ridges and 'outer' hill slopes; and
- Significant habitats and threatened species will not be affected.

### INTERPRETATION

To support the Visitor Education Program, the resort management will develop interpretation materials for display throughout the site and in accommodation rooms. The Revitalisation Plan provides an opportunity to educate visitors on the importance of taking positive action at home to address climate change.

### VISITOR EDUCATION PROGRAM

Great Keppel Island will engage its visitors in a sustainability journey through a visitor education program. The program will utilise the Research Station, researchers, signage and education materials to educate visitors about Great Keppel Island's Great Barrier Reef conservation efforts. In meeting the Great Barrier Reef's obligation under the World Heritage program, Great Keppel Island will also educate visitors and reinforce the World Heritage Values.

Education will not just be about the Great Barrier Reef and marine environment but also about the technology used on site. Resorts internationally are increasingly requested to provide tours to enable visitors to experience leading edge technology. Great Keppel Island will position itself as a Learning Centre for the 21st Century. Green technologies will be a visible part of the Great Keppel Island experience and visitors will be engaged in the use of these technologies.

### EDUCATION PROGRAM FOR SCHOOLS

As part of Great Keppel Islands Corporate Social Responsibility, researchers from the Research Station will visit local schools to give presentations on the Great Barrier Reef, climate change and how the Resort is responding to climate challenges. These visits will provide an opportunity for students and teachers to understand what is happening around them and what they can do to help.

The schools will also have the opportunity to visit the Resort to experience first-hand the Great Keppel Island's sustainable practices.



